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Sanders et al.

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(54) **SYSTEM TO EVALUATE PROSTHETIC SOCKETS**

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CPC **A61F 2/5046** (2013.01); **A61F 2/76** (2013.01); **A61F 2/80** (2013.01); **A61F 2002/505** (2013.01)

(58) **Field of Classification Search**
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(57) **ABSTRACT**

Systems, methods, and software are provided for assessing manufacturing errors of a prosthetic socket to facilitate a clinical assessment of the socket. The embodiments disclosed herein may align and compare a manufactured socket shape to a desired socket shape to determine whether clinically significant errors are present in the manufactured socket. A mean radial error (MRE) may be calculated and compared to a set threshold. If the MRE falls below the threshold an interquartile range (IQR) may be calculated and compared to an IQR threshold. If the IQR falls below the IQR threshold, surface normal angle errors (SNAE) may be calculated and plotted to the surface model. If the SNAE plot does not include closed contour regions, the socket may proceed to patient fitting. If the MRE or IQR thresholds are exceeded, or if the SNAE plot indicates closed contour regions, the socket may be reshaped accordingly, prior to fitting.

19 Claims, 14 Drawing Sheets

